

Floodplain Management
24 CFR Part 58.5(b)(1) and 24
CFR Part 55

Outline

- Background
- 24 CFR Part 55 – HUD's Floodplain Management Regulations
- Eight Step Decision-Making Process
- ERR Documentation

BACKGROUND

Evolution of Federal Flood Hazard Control

Federal flood hazard control was historically reactive

Pre-1966 - Structural flood control measures



1966 - Executive Order 11296, *“Flood Hazard Evaluation”*

- Recognition that structural flood control measures alone are inadequate
- Established the concept of a national flood insurance program

Hurricane Katrina
New Orleans, Louisiana
August 2005
1,836 deaths
\$80-\$100 Billion in damages



Legislation Governing Federal Flood Hazard Control



Hurricane Ike
Galveston, Texas
September 2008
135 deaths
\$30 Billion in damages

National Flood Insurance Act of 1968 (NFIP)

- Established the National Flood Insurance Program (NFIP)

Flood Disaster Protection Act of 1973

- Expanded the limits of NFIP coverage available
- Established “Participating Communities”

Executive Order 11988, “*Floodplain Management*,” of 1977

- Directs the implementation of the Unified National Program for Floodplain Management
- Applies to all agencies that:
 - Acquire, manage or dispose of Federal lands and facilities
 - Undertake, finance or assist construction and improvements
 - Conduct activities affecting land use, including planning regulating and licensing
- Applies in all floodplain locations with a one percent change of flooding in any year

E.O. 11988 Requires Agencies To:

- Carry-out decision-making that **recognizes that floodplains have unique and significant public values**
- **Avoid** the base floodplain
- **If unavoidable, adjust** to the base floodplain by
 - Reducing the hazard and risk of loss
 - Minimizing the impact of floods on human safety, health and welfare
 - Restoring and preserving natural and beneficial floodplain values
- Create framework for meeting these requirements by complying with the Water Resources Council's *Unified National Program for Floodplain Management*
- Adopt floodplain management regulations

Floodplain Management Guidelines for Implementing E.O. 11988, 43 FR 6030 (1978)

- U.S. Water Resources Council—Floodplain Management Guidelines
 - http://portal.hud.gov/hudportal/documents/huddoc?id=DOC_14216.pdf
- Point of reference for each agency to prepare implementing procedures for compliance with the EO.

Defines What *Practicable* Means

- Capable of being done within existing constraints.
 - “Existing Constraints” applies to those in place **before** the final decision on project siting is made
 - Test of practicability depends on the situation:
 - Environment
 - Costs
 - Technology



Tropical Storm Allison
Houston, Texas
June 2001
41 deaths
\$5 Billion in damages

**24 CFR PART 55 – HUD’S
FLOODPLAIN MANAGEMENT
REGULATIONS**

24 CFR Part 55 HUD's “Floodplain Management” Regulations

- Implements Executive Order 11988, including:
 - The “no practicable alternative” test of avoidance
 - The “8-Step” decision-making process (55.20)
- Assigns responsibility to grant recipient Certifying Officer administering activities subject to 24CFR Part 58 - 55.3(c)



Hurricane Ike
Gilcrest, Texas
September 2008

HUD's Regulations Require

HUD programs to:

- Reduce the risk of flood loss
- Minimize the impacts of floods on human safety, health and welfare
- Restore and preserve the beneficial values served by floodplains

Applicable to:

- Acquisition
- Disposition
- Construction
- Substantial Rehabilitation



Slow Moving Summer Thunderstorm
Edmond, Oklahoma
June 2010

Options for Projects in Special Flood Hazard Areas



Flash Flood
Farmington, New Mexico
August 2010

- **Avoid:** Reject the Project
- **Re-evaluate:** Apply to FEMA for letter of **map amendment or map revision** (LOMA or LOMR) – Remove the project from the flood hazard
- **Adjust:** Conduct Eight Step Decision-Making Process of 24 CFR Part 55.20
 - Identify practicable alternatives
 - Minimize Flood Hazards
 - Resolve beneficial floodplain values

Re-evaluation: Clarify FEMA Floodplain Designation



Stalled Front
Little Rock, Arkansas
November 2011

Submit map and survey data for the property.
FEMA review takes 4-6 weeks (or longer)

- **LOMA** – “amendment” is a correction to the map; e.g., better map data provides for more accurate map
- **LOMR** – “revision” – used where particular site has been elevated above the SFHA. FEMA can also issue Conditional Letter of Map Revision (CLOMR)
- **CLOMR** - opinion whereby FEMA states that *if* the proposed changes are made to the project, then LOMR could be made. Careful: the “as-built” plans may differ from the proposed plans, so the proposed plans must be followed or else complete the “8-step process”

Adjust: Example Measures that Could be Adopted through 8-Step Process

- Minimize fill in floodplain
- Minimize grading; restore natural contours
- Acquire/relocate non-conforming structures
- Preserve natural drainage
- Maintain/restore wetlands and riparian buffers
- Control urban runoff & storm water discharge
- Minimize tree cutting
- Elevate and floodproof structures
- Scale back size/scope of project
- Enforce deed restrictions/covenants



Great Mississippi River Flood of 1927
Dermott, Arkansas

55.20 EIGHT STEP DECISION- MAKING PROCESS

8-Step Process (55.20)



Spring Storm
Pocahontas, Arkansas
April 2011

- Applies to projects in the **Special Flood Hazard Area (SFHA)** as designated by FEMA
- **Critical action:** Activity for which even a slight chance of flooding would be too great and which might result in loss of life, injury or property damage. Examples:
 - Production/ storage of highly volatile, explosive, toxic materials
 - Essential or irreplaceable records or emergency services
 - Occupants having restricted mobility - hospital, nursing home
- Shall be **concluded** prior to completion of the NEPA environmental review (55.10), including prior to the finding of a FONSI

Exceptions to 8-Step Process 55.12:

- Purchasing, leasing or re-financing of one-to-four unit existing housing
- Financial assistance for minor repairs or improvements on one to four family properties that do not meet the thresholds for “substantial improvements” under 55.2(b)(8)
- Disposition of individual HUD-acquired one-to-four family properties
- Exempt activities at 58.34.
- Floodplain site with LOMA or LOMR or CLOMR
- HUD foreclosure action (e.g., repossession, receivership, foreclosure or similar acquisition)
- Minor amendments to previously approved actions.
- Project site with incidental portion in floodplain (with conditions).
 - No construction in floodplain
 - Site drainage is adequate
 - Restrictive covenant on floodplain use
- Emergencies (very limited definition)
- Certificates and Vouchers (non-project based Section 8)

Summary of Steps

- **Step 1.** Determine whether the proposed action is located in 100-year floodplain (or 500-yr for critical action)
- **Step 2.** Publish “**Early Public Notice**” of the proposal to consider an action in the floodplain (15 day minimum comment period)
- **Step 3.** Evaluate practicable alternatives to locating the proposed action in a floodplain
- **Step 4.** Identify the potential impacts associated with occupancy and modification of the floodplain



Hurricane Ike
Winnie, TX
September 2008



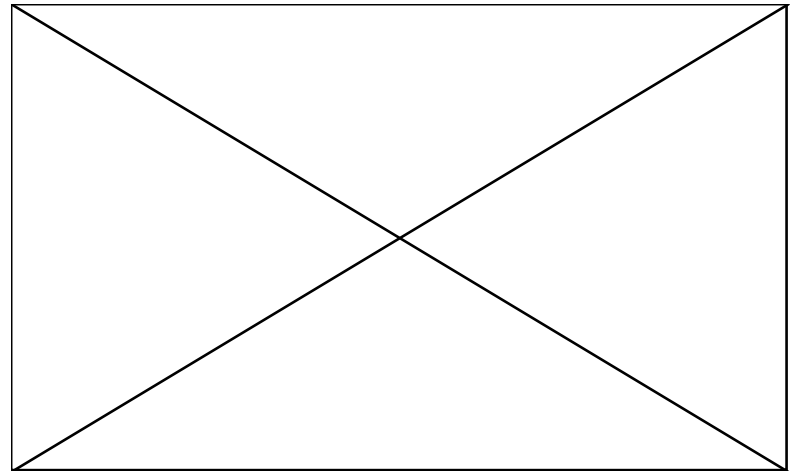
Summer Storm
Miami, Oklahoma
July 2007

- **Step 5.** Design or modify the action to minimize adverse impacts and preserve the beneficial values of the floodplain
- **Step 6.** Reevaluate whether proposed action is practicable
- **Step 7.** Publish “**Final Public Notice**” of decision to identify why there is “no practicable alternative,” and the alternatives and mitigation measures adopted (7 day minimum comment period)
- **Step 8.** Implement proposed action with mitigation measures

Step 1: Determine if Project Area is Located in 100/500 Year Floodplain

- Use **FEMA maps** to determine if project is in flood hazard area. Check for FEMA flood maps on-line or hard copy.
- FEMA Map Service Center:
<http://www.store.msc.fema.gov>
- Photocopy FEMA map, create FIRMETTE, or obtain flood information from other source
- Mark the site on the map
- Use to document the ERR

Flash Flood
Oklahoma City, OK
June 2010



FEMA Flood Zone Designations

- **Not in a floodplain**
 - FEMA designated as **Zone C** or **Zone X (unshaded)**
 - Minimal flood hazard, above 500-year floodplain
 - 8-step process not required
- **500-Year Floodplain**
 - FEMA designated as **Zone B** or **Zone X (shaded)**
 - Areas with 0.2% annual chance of flooding
 - (0.2% X 500 years = 100%)
 - 8-step process required for critical actions
- **100-Year Floodplain**
 - FEMA designated as **Zone A***
 - * Any Zone with an A (A, AE, A1-A30, AO, AR, A99)
 - Areas with a 1% annual chance of flooding (1% X 100 years = 100%)
 - 8-step process required

- **Floodway**

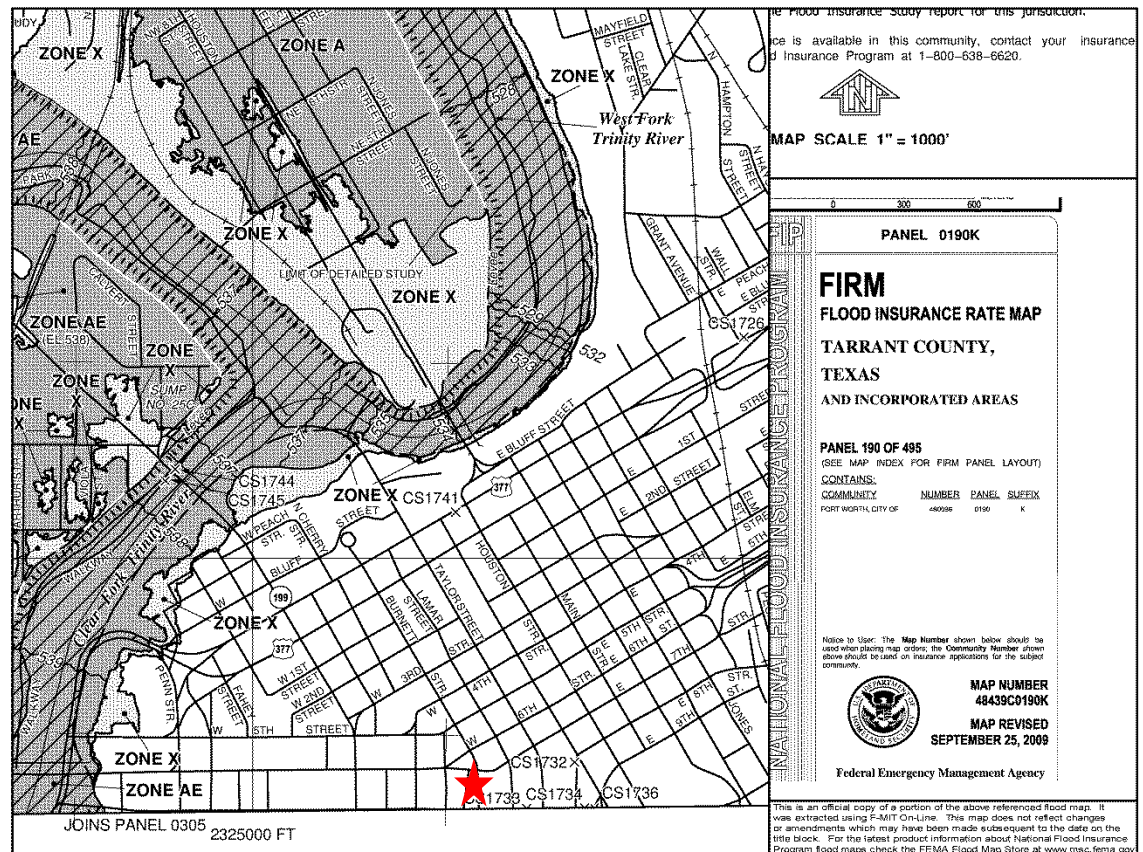
- FEMA designated as **Zone AE (hatched)**
- **STOP** - No HUD assistance may be approved for use in a *floodway*, except for functionally dependent uses, such as bridge or a dam, [24 CFR 55.1(c)(1)] then 8-step process required.

- **Coastal High Hazard Area**

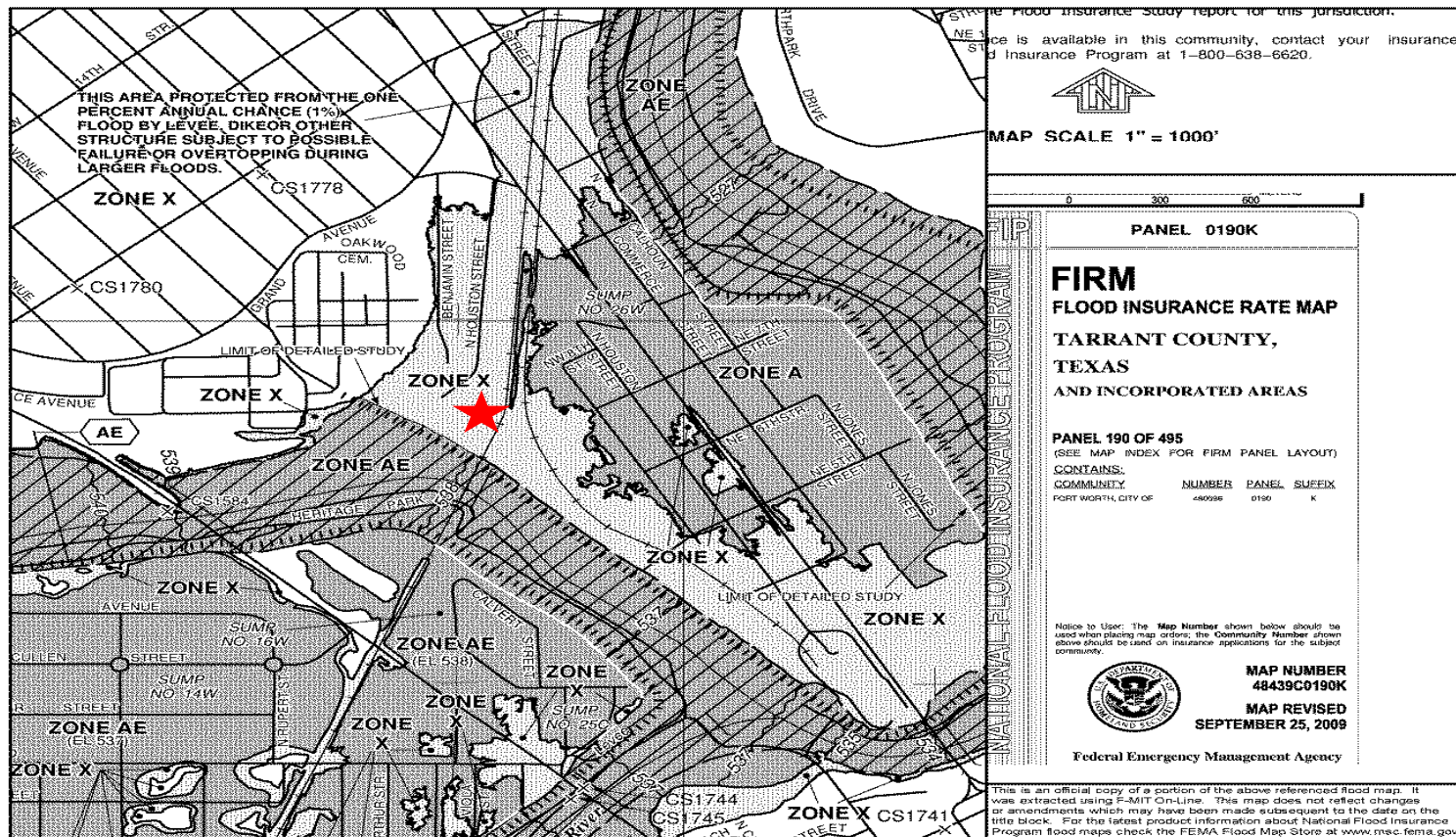
- FEMA designated as **Zone V**
- **STOP** - No HUD assistance may be used for a critical actions [24 CFR 55.1(c)(2)]
- Functionally dependent uses and non-critical actions designed for coastal high hazard areas are allowed with restrictions [24 CFR 55.1(c)(3)], 8-step process required.

Example 1

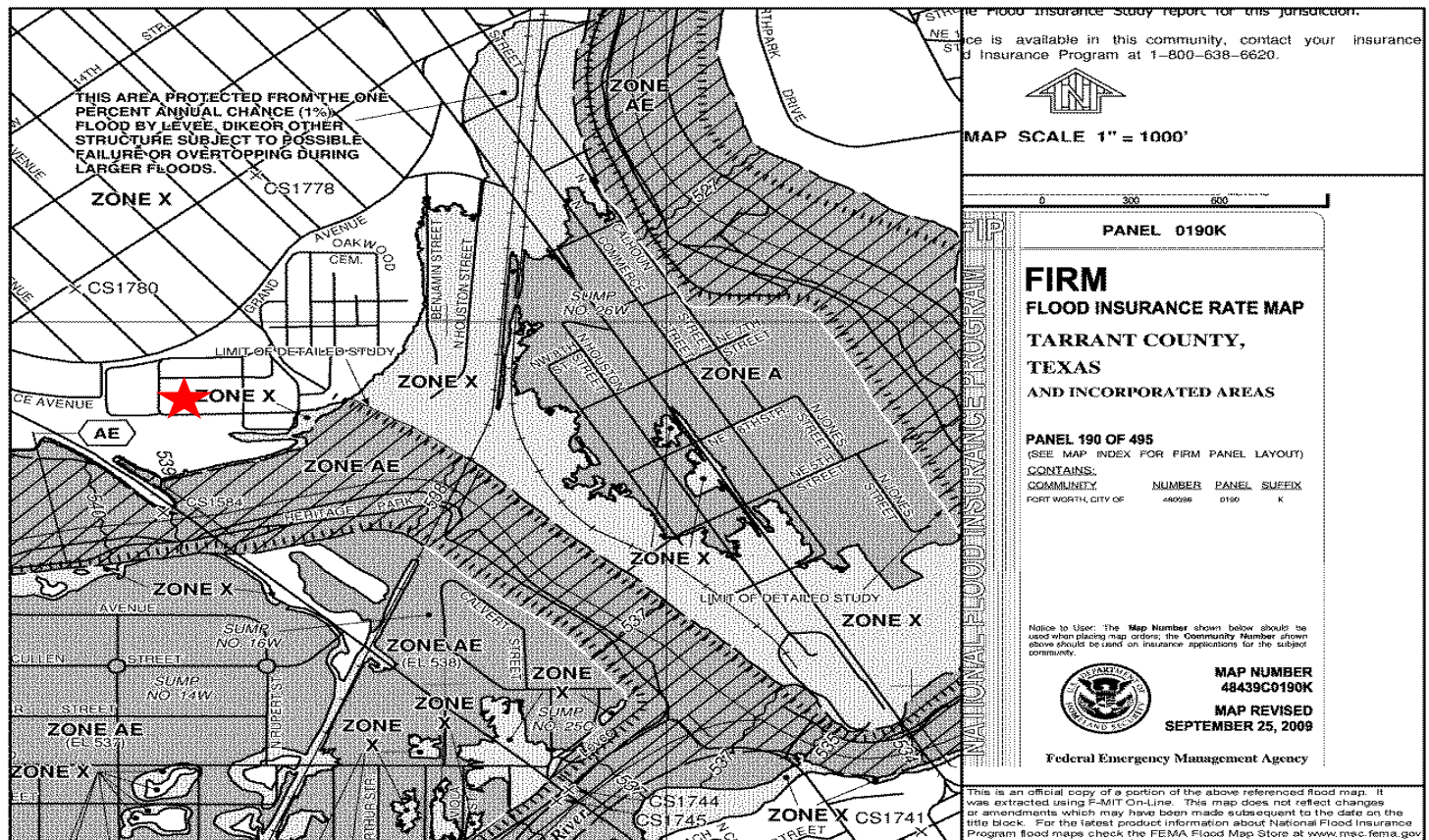
FEMA Map Service Center:
<http://www.store.msc.fema.gov>



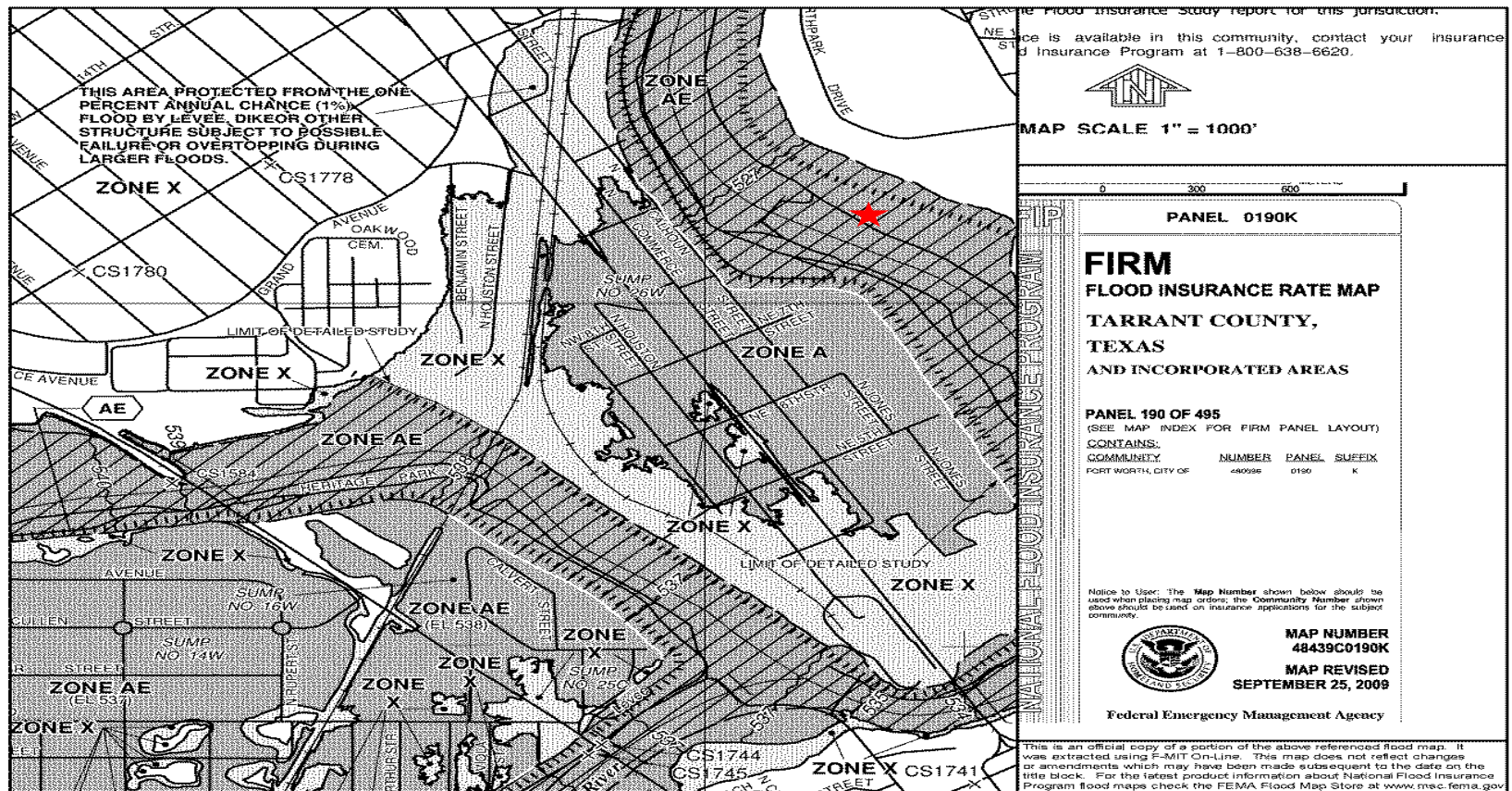
Example 2



Example 3



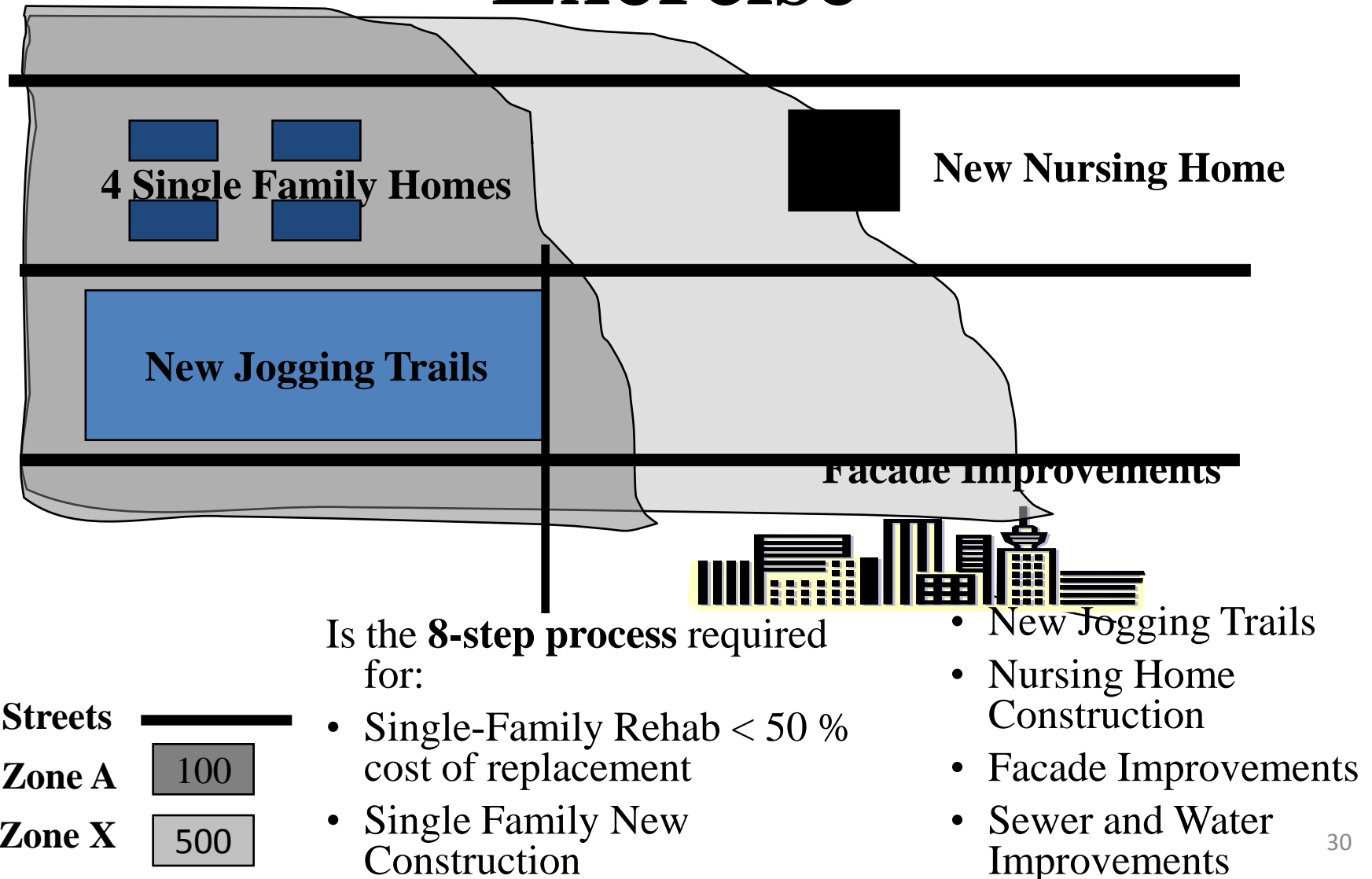
Example 4



If Area is Unmapped-Use “Best Available Information”

- FEMA Community Status Book
www.fema.gov/fema/csb.shtml
- U.S. Corps of Engineers
- Community Flood Administrators
- U.S. Geological Survey maps
- Soils maps (e.g., alluvial soils) - USDA Natural Resources
- Conservation Service
- State departments of water resources
- County public works
- Local flood control or levee districts
- Contract survey or study by licensed consulting engineer
- Supplement above with aerial photos, topographic maps, site visit

Floodplain Determination Exercise



Step 2: Early Public Review



Summer Storm
Hatch, New Mexico
August 2006

- Notify public at earliest possible time of consideration of a proposal in 100-year floodplain (or 500-year floodplain for critical actions).
- Must be published in local printed news medium
- Must be sent to agencies and individuals with interest in the proposed action
- 15 day minimum comment period
- State name, location, project description, acres in floodplain and RE contact information
- Sample notices in Region VI Guidebook Attachment 1

Step 3: Identify and Evaluate Practicable Alternatives

- Alternative sites (outside floodplain)
- Alternative methods that achieve the same project objective/purpose
- “No Project” Alternative
- *Practicable*: measured by general concept of site feasibility – natural, social, economic, legal factors.
- RE shall consider feasible technological alternatives, hazard reduction methods and related mitigation costs, and environmental impacts when reviewing practicable alternatives.



Spring Storm
Austin, Texas
April 1935

Step 4: Identify Potential Direct and Indirect Impacts

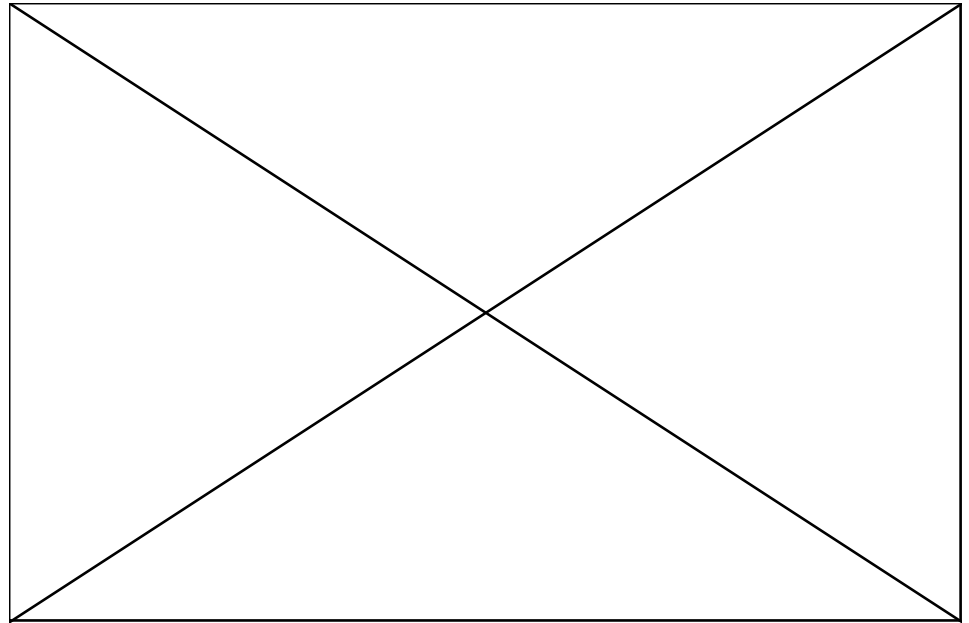
- Two areas of concern:
 - Impacts to Lives and Property
 - Impacts to Floodplain
- Three types of impact:
 - Positive & Negative
 - Concentrated & Dispersed
 - Short- and Long-Term
- Does project encourage future Floodplain development?



Flood of 1949
Fort Worth, Texas
Cultural District
Corner of 7th Street and University Drive

Step 5: Minimize, Restore, Preserve

- **Minimize** – rigorous, demanding standard – “reduce harm to smallest possible degree.” Far beyond mitigate or alleviate
- **Restore** – re-establish environment in which the natural & beneficial floodplain values can operate
- **Preserve** – prevent modification to natural floodplain or maintain as closely as possible to its natural state



Step 6: Re-evaluate Proposal and Alternatives



Great Mississippi River Flood of 1927
New Iberia, Louisiana

- Is project still feasible considering:
 - Impacts to floodplain (Step 4)
 - Minimization actions and opportunities to restore & preserve floodplain values (Step 5)
- If not, and in light of Steps 4 & 5, do alternatives rejected in Step 3 appear feasible? Prepare table to compare adverse impacts of alternatives
- If neither proposed project nor alternatives are acceptable, the alternative is no action

Step 7: Public Explanation

- If no practicable alternative, inform the public. 7 day minimum comment period.
Notice must include:
 1. Reasons why project must be located in floodplain
 2. List of alternatives considered
 3. All mitigation measures to be taken and actions to restore and preserve natural and beneficial values
- Sample notice in Region VI
Guidebook Attachment 1



Spring Storm
Silver City, New Mexico
April 1935

Step 8: Implement Project

- RE has **continuing responsibility** to ensure that measures in Step 7 are implemented.
- Documentation (55.27) must show:
 - Actual sites were identified for consideration as practicable alternatives outside of floodplain
 - Reason for non-selection of above sites as practicable alternatives
 - Minimization measures have been applied to the project design
- Sample 8-step process in Region VI Guidebook Attachment 1.



Flood of 1923
South Robinson Avenue
Oklahoma City, Oklahoma

ERR DOCUMENTATION

ERR Documentation

- Identification of Floodplain
 - FEMA FIRMette Maps
 - Must include project location on maps
- Evaluation of Impacts
 - 8-Step Analysis (24 CFR Part 55.20)
 - Include publications and affidavits
 - Include Direct and Indirect impacts
 - Include Cumulative impacts

Incorporate Conditions and Mitigation Measures

- Best Management Practices
- Restoration and Preservation Measures
- Minimization Measures
- Written documentation for ERR
- Include mitigations/conditions in Project Description Section of 7015.15 (RROF form)

Questions?